DSESHYKZ DSD1100

HUMAN xiap

SEQ ID NO:3	gaaaaggtggacaagtcctaatttcaagagaagatgacttttaacagttttgaaggatct 1	. 0
SEQ ID NO:4 a))
·	aaaacttgtgtacctgcagacatcaataaggaagaagaatttgtagaagagtttaataga 61++++++	200
r o		
	ttaaaaaacttttgctaattttccaagtggtagtcctgtttcagcatcaacactggcacga	, 0
rd	ר א	o
	.gc. - t	•
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	aaagtatccccaaat	1
ď	V G R H R K V S P N -	300
	<u>g</u>	4
rd ·	S E S O	0 1

FIG. 1 (PAGE 1 OF 7)

CASSATA LOGGEO

HUMAN xiap

20		80		0.40		009		099	1	720	
cagaatggtcagtacaaagttgaaaactatctgggaagcagagatcattttgcctta	Z	ggccatctgagacacatgcagactatctttgagaactgggcaggttgtagatata	R P S E T H A D Y L L R T G Q V V D I	agacaccatatacccgaggaaccctgccatgtattgtgaagaagctagattaaagtcc	DTIYPRNPAMYCEEARLKS -	tcagaactggccagactatgctcacctaaccccaagagagttagcaagtgctggactc	Q N W P D Y A H L T P R E L A S A G L	tactacacaggtattggtgaccaagtgcagtgcttttgttgtggggaaaactgaaaaat	G I G D Q V Q C F C C G G K L K N	ggaaccttgtgatcgtgcctggtcagaacacaggcgacactttcctaattgcttcttt 72	E P C D R A W S E H R R H F P N C F F
toca	ď	acag 		tcaga		ttta	O H	ac Tact	X X	tggg	
ומ ואר יי	H	g 421 -	a U	t 481 -	rs rs	541 t		, t		1	

FIG. 1 (PAGE 2 OF 7)

ooroeo" chrahoo

HUMAN xiap

at -+ 780	1	tc -+ 840	1	tt -+ 900	1	rat + 960		tat + 1020	ı >ı	gag + 1080	u u
gagttctgataggaa +	Z	gga 	H	gat	[I4	actgal	Ω	laat	×	caatattcatttaactcattcacttg +	i i
ta	c c.	gcac	DC;	t	O	taa 	Ę٠	gca		Ca(
tga 	Д	(G)	4	ag. 	Ø	g L	רו	3gt. +	U	a +	ഗ
t t c	ഗ	tga +	ជោ	י ש	C	Jagge	Q.	cagg.	Ŋ	CTC	Ή
gag	ഗ	tta	>	ttgc	æ	ragg 	Ŋ	atc.	വ	таа. 	۲
tgt 	>	aga	Ω	gct		tgg	, U	igta 	् ≯•	a i t	J
atgct +	4	JC 1	A	gcagc	O	ctgtggagga -+	υ	atg -+-	3	1 C	II
ga	Ω	catgo	Σ	gga	ធា	ו מ	田	taa	×	tat	H
וע	ຜ	ן ו	ഗ	ਲ ।	×	ott 	[I4	tgc 	. 4	Caa 	z
gaa	ш	tcca +	Д	taac +	Z	aagtgcttt +	O	aca +	H	aaa +	Z
cgaagtg +-	ഗ	aaat 	z	agt (>	aaa. 	×	acaa +	O	tat	н
.cga	œ	aaga 	pc;	tactcagttaaca 	S	taaagta	>	gtgaagacccttgggaacaacatgctaaatggtatccagggtgcaaatat ++++++	ம	gaatata	> +
att	н	t C C 2	Д	ata:	≯°	taa	×	ttg 	3	ו מו	ы
aat	z	aacaaatcttccaag	IJ	gatal +-	H	ggtga	Ω) - -	ρı	a c	O
Ctt	ᆸ	aaal	Z	ין ער פיי	3	agg 	ტ	aga 	Ω	5551	
aat	z	lace	Ę·	gac	E	gtgaa 	ជា	tga 	Ш	адаа	×
C99	œ	t t C 2	ഗ	ומ	ტ	agga -+-	G	ccag +-	ഗ		ø
ggc	Ö	aat	z	tt	ĹŦı	ר ר ו דנ	្ន	gaa	ρι	ctgttagaac +	ោ
t g	ъ Ц	CCa	_{ርተ}	act 	Ę	gct	A	raag	×	gttä	ᆸ
gttttgggccggaatcttaatat	>	ttcccaaattc +-	Ĺ	tttacttttg(ĺΙ	tatgctttag	≯4	tggaagccca	3	0 1	L)
721		781	• •	841		901		961		1021	
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FIG. 1 (PAGE 3 OF 7)

D9654743.D961

HUMAN xiap

1140	ı	1200	ı	1260	1	1320	t	1380	ı	1440	
gagtgtctggtaagaactactgagaaaacaccatcactaacta	ECLVRTTEKTPSLTRIDDT	atcttccaaaatcctatggtacaagaagctatacgaatggggttcagtttcaaggacatt	I F Q N P M V Q E A I R M G F S F K D I	aagaaaataatggaggaaaaattcagatatctgggagcaactataaatcacttgaggtt 1201	KKIMEEKIQISGSNYKSLEV	ctggttgcagatctagtgaatgctcagaaagacagtatgcaagatgagtcaagtcagact	LVADLVNAQKDSMQDESSQT	tcattacagaaagagattagtactgaagagcagctaaggcgcctgcaagaggagaagctt	SLQKEISTEEQLRRLQEEKL	tgcaaaatctgtatggatagaaatattgctatcgtttttgttccttgtggacatctagtc	FIG. 1 (PAGE 4 OF 7)
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HUMAN xiap

1	1500	1	1560	1	1620	ŀ	1680	ı	1740	1	1800	1
CKICMDRNIAIVFVPCGHLV	acttgtaaacaatgtgctgaagcagttgacaagtgtcccatgtgctacacagtcattact	T C K Q C A E A V D K C P M C Y T V I T	ttcaagcaaaaatttttatgtcttaatctaactctatagtaggcatgttatgttgttct 1501	F K Q K I F M S *	tattaccctgattgaatgtgtgatgtgaactgactttaagtaatcaggattgaattccat 1561+++++		tagcatttgctaccaagtaggaaaaaaatgtacatggcagtgttttagttggcaatata 1621++++++		atctttgaatttcttgatttttcagggtattagctgtattatccatttttttt	ret	tttaattgaaaccatagactaagaataagaagcatcatactataactgaacacaatgtgt	
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HUMAN xiap

tat + 1860 	ytta + 1920 	ggtg + 1980	ttct + 2040 	nttg + 2100	gtca + 2160
attcatagtatactgattttaatttctaagtgtaagtgaattaatcatctggatttttttt	tcttttcagataggcttaacaaatggagctttctgtatataaatgtggagattagagtta ++++++	atctccccaatcacataatttgttttgtgtgaaaaggaataaattgttccatgctggtg +++	gaaagatagagattgtttttagaggttggttgttgtgtgttttaggattctgtccattttct +++++	tgtaaagnnataaacacgnacntgtgcgaaatatntttgtaaagtgatttgccattnttg +++	aaagcgtatttaatgatagaatactatcgagccaacatgtactgacatggaaagatgtca
1801	1861	1921	1981	2041	2101

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D9654743.090160

HUMAN xiap

	2161	nagatatgttaagtgtaaaatgcaagtggcnnnacactatgtatagtctgagccagatca 	2220
๗			1
	2221	aagtatgtatgttnttaatatgcatagaacnanagatttggaaagatatacaccaaactg ++++	2280
Ø			1
,	2281	ttaaatgtggtttctcttcggggggggggggggtttgggggggg	2340
ಹ			1
	2341	naggggccttttcactttcnacttttttcatttttgttctgttc	2400
๗			ı
	2401	gtanaccccnaagggttttatggnaactaacatcagtaacctaacc	2460
מ			1
	2461	gtnctcttcctagggagctgtnttgtttcccacccacccttccctt	2520
て			ı
	2521	ctgagtgctgggggcacttn FIG. 1 (PAGE 7 OF 7)	

DSES4743 DGOICO

raga + 60	AAA + 120	TTC - + 18C	CCA - 24(z	TCCA + 30	S E	TATTACA	F-
TCCTTGAGATGTATCAGTATAGGATTTAGGATCTCCATGTTGGAACTCTAAATGCATAGA	AATGGAAATAATGGAAATTTTTCATTTTGGCTTTTCAGCCTAGTATTAAAACTGATAAAA	GCAAAGCCATGCACAAACTACCTCCCTAGAGAAAGGCTAGTCCCTTTTCCTTCC	ATTTCATTATGAACATAGTAGAAAACAGCATATTCTTATCAAATTTGATGAAAAGCGCCA	MNIVENSIFLSNLMKSA	ACACGTTTGAACTGAAATACGACTTGTCATGTGAACTGTACCGAATGTCTACGTATTCCA	TFELKYDLSCELYRMSTY	CTTTTCCTGCTGGGTTCCTGTCTCAGAAAGGAGTCTTGCTCGTGCTGGTTTCTATTACA	FPAGVPVSERSLARAGFY FIG. 2 (PAGE 1 OF 8)
SEQ ID NO:5	υ	υ		SEQ ID NO:6 C		υ		U

OSEHYKE DSOIDO

											
420	ı	480	1	540	•	009	ı	099	ı	720	1
	CC.		လ	\$ †	€⊣	TT -	≻	TGA +	Σ	TCAGA	E +
AA :	×	TCAGA	ø	TCAGTAA	>	CTCTT	ഗ	CTJ	Ч	TC.	Ø
7 	3	GTT	>	TC.	S	TGG(O,	IGC 	A	TTT	<u>[2.</u>
AC	z	ITC	[Ŀı	CTTCT -+	ဟ	ည်	œ	PTC,	ഗ	TAC	E→
CTGGTGTGAATGACAAGGTCAAATGCTTCTGTTGTGGCCTGATGCTGGATAACTGGAAAA	Д	CCTACTGAAAAGCATAAAAAGTTGTATCCTAGCTGCAGATTCGTTCAGA	т		Д	CACATTCCACACTCATTACTTCCGGGTACAGAAAACAGTGGATATTTCCGTGGCTCTT	ſτι	ATTCAAACTCTCCATCAAATCCTGTAAACTCCAGAGCAAATCAAGAATTTTCTGCCTTGA	[I4	CTACCCCTGTCCAATGAATAACGAAAATGCCAGATTACTTAC	ា
TGG		3007	υ	rttc 	Ţ.	GGATAT	≯.	GAA	田	ATT	ت ت
1GC	H	GCT		CTJ		3GA		CAA	O	AG.	ຼ ຜ
CTGA'	X	CTA		CAACTTGGAAGCTACCTCTCAGCCTACT	F L	AGT(-+-	_ເ	AAT -+-	z	900	NENAR (PAGE 2 OF
ည်	႕	ATC	<u>Q</u>	AGC		ACA		AGCA	Z A	AAT	z (N
TGTGG	ტ	GT	> +	DI I	Ø	AAA -	Z .	GAC	œ.	BAA.	ы B
TTG 	O	GTT	h	CTC	Ø	CAG	ſΔÌ	CCAG		ACC	Ä
CTG' -+-	O	AAA.	 -	TAC	٤٠	3TA(Ę	AAACTC	ഗ	ATA 	
TGCTTCTGT	[z.	IAA	 	AGC	Ø	999	G	AA?	Z	IĞA.	z N
TGC	U	CAS	ш	3GA	印	1 1 1	Ω	TGJ	>	CAAT	Р н FIG. 2
AAA 	×	AAG	<u> </u>	TTC	ı	ACT +	J	TCC++	Ω.) 1 1 1	a E
GTCAAA	>	GAA	E M	AAC	Z	CACTCATTACTTCCGGGTACAGAAAC	J	TCCATCAAATCCTG'	z	CCTGTC	O
A AG(×	ACT	! [AAC	z	Z i	ഗ	ATC	တ်	, Ç	Ω4
AC.	Д	CI	1 04	7.E	>	CAC	æ	700	Δ	TACC	>-
AATG	 -	GTC		TTCC +-		ACA -+-	E	TCT	ß	TCC +	ဟ
rga i	1	ACA	S Q	AT	z	FCC.		ATTCAAACTC	Z	TGAGAAGTTC	ဟ
TG		3AG		TA.		CAT		C.P.	ß	AGA	
TGC	> b	GAGGAGACAGT	Ü	GTC	,	CAC		AT		TG7	
		U		0 7		7 4 1	1	109	4	561	. ⊃
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780		0.00		006	. 1	960		1020	ı	1080	1	
	· U			AGGATAATGCTATGTCAGAACACCTGAGACATTTTCCCAAATGCCCATTTATAGAAAATC		AGCTTCAAGACACTTCAAGATACACAGTTTCTAATCTGAGCATGCAGACACATGCAGCCC	A	GCTTTAAAACATTCTTTAACTGGCCCTCTAGTGTTCTAGTTAATCCTGAGCAGCTTGCAA	S	GTGCGGGTTTTTATTATGTGGTAACAGTGATGATGTCAAATGCTTTTTGCTGTGATGGTG	<u>ი</u>	
CATGGCCATTGACTTTCTGTCGCCAACAGATCTGGCACGAGCAGGCTTTTACTACATAG	н ,	CAGAGTGGCTTGCCTGTGGTGGAAAATTGAGCAATTGGGAACCGA	(A)	SAAA	ы П	GCAC	A	CTTC	,i	GAT	۵	·
racı		TGGC	3	ATA(н	CACAT		AGCAG	O)	TGCTGT	Ü	
TTTT	Lu	AAT		\TTT +	Er,	GACA	۲	TGAC	ប្រ	TTG(O	
16GC	ტ	3AGC	S	7000	Ω,	GCA	œ	TCC	Ω	CTT	Ĺτι	
AGC?	4	ATT(ATG	U	GAGCAT	Σ	TCTAGTTAATC	Z	CAAATG +	O	
ACGA		AAA	1 + ! \(\(\)	CAA	×	rgag		TAG1	>	TCA	₩	8 :
299	A	TGG	1	PTCC	ւ	ATC	IJ,	TTC,	>	ATG	>	(PAGE 3 OF
ATCI	ם ב	GTG	i O	ATT	[II,	CTA	. v	GTGT	S S	rgatg -+	D D	က [II]
CAG2	!	CCT	A C G	GAC	R H	TTT	. 61	CTCTAG	ω O	AGT(ν Γ	10
CAA	E G	TTG	1	CTGA	ᄓ	ACAC	E-	000	Д	AAC	z	(P)
ວອວຸ	S H	rgcı	H O A	CAC	=	TAC	, >-	TGG	3	3GGT	ග	2
CTG	† 	GCT	† A	AGAA	ធ	TCAAGATACACAGTTTCTAA	64	TAAC	z	TGT	>	FIG.
TTT	! ! [14	AGTC	>	GTCA	တ	TTC	S	CTT	Ĺ'n	TTA	>	II.
3AC1	E→	CAG	pc.	TAT	Σ	CAC	Ę	CATT	ŢŦ	TTT +	>	
ATT	 	aaga	1 0	ATGC		AAG?	Д	AAA(₽	GTT	[I4	
3600	<u> </u>	CTGG	ט	ATA.	Z	TTC	0 7	TTAA	ᅜ	9908	o A	
CATO	3	GACCTGGAGA	<u> </u>	AGG	Ω	AGC	1 	GCT	174		N.	
	721		781	2.7		7	106 301	961	! !	1021		
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DSSLTLS DSGLOD

HUMAN hiap-1

1140	1	1200	1	1260		1320	1	1380	ı	1440	ŀ
	œ		>-		ជោ	4 +	Z	AGA +	E	GTGT	H
CCAA	വ	AGTT +	S	250	Ø	GATGA	Σ	AACA	O	TGT	>
rTT.	Ĺ	225	A	AAT	z	CATC	Σ	A	×	CT	H
rgg	3	CAA	O	GAA	ធ	ATC	н	TGGTA	>	AATGAT +	Ω
GACTCAGGTGTTGGGAATCTGGAGATGATCCATGGGTTCAACATGCCAAGTGGTTTCCAA	×	GGTGTGAGTACTTGATAAGAATTAAAGGACAGGAGTTCATCCGTCAAGTTCAAGCCAGTT	>	ACCCTCATCTACTTGAACAGCTGCTATCCACATCAGACAGCCCAGGAGATGAAATGCAG	Ω	AGTCATCAATTATCCATTTGGAACCTGGAGAGACCATTCAGAAGATGCAATCATGATGA	æ		ᄓ	AAAATCCTAGCAACTGGAGAATTATAGACTAGTCAATGATCTTGTGT	Z
TGCC	ধ	CAA	o o	669	G	CA7	Ω	AAGCC	ഗ	4GT(>
CAT	I	CGT	CC.	CCA	Сı	GAZ	ជា	rAG7	~	ACT/	L
CAAC	ø	TCATC	н	AGC	ഗ	TTCAGAAGA	ဟ	TAGTA	ß	TTATAGACTAGT	R.
GTT	>	TTC 	[I4	GAC	Ω	CAT	I	CTT	[II.	rta:	>-
IGG(3	GAGT	ជា	TCA	ഗ	GGAGAAGACCA	Ω	9999	ပ	SAAS	Z
CCA'	Ω.	GACAGG	a	ACA +	Ę	GAA	ជា	ATC.	Σ	GAGAG	ធា
SAT	Ω	GGA	ڻ ن	TCC	ഗ	GGA	ტ	GGAAAT	臼	TGG2	Ŋ
3AT(Ω	AAA 	×	CTA	J	CCT	Оч	GTC	>	AAC	E٠
3GA(ე	ATTA	H	CTG	L)	TGGAA	ជា	S S S S	æ	CTAGC/	A
ICTC -+-	Ŋ	AGAA	œ	AACAGCTG	O ⁱ	TTG	, i	rgcrgccgr	æ	CTZ	L
GAA	ш	ATA	ы	GAA	ГЛ	CAT	I	raaı	Z	AAT(н
TGG(3	TTG	,J	CTT	L1	ATC	н	BATT	н	AAA.	×
rgr' - + -	O	TAC -+-	>	ATCTA	ı	AATT	Н	CCTGTG	>	GAGA +-	Ω
AGG'		3AG	ы	CAT	二二	TCA	ស			CAC	ø
GACTCAGGTGTT	r R	GGTGTGAGTAC1	U	CCTC	Д	TCA		ACT		CAGTTCAGAGA	>
GAC		GG	J			AGT	 				
1081	 - 	1141	4 - - -	1201		1761	7071	1321	4 1 1	1381	
• ,	υ		υ		υ		υ		U		U

FIG. 2 (PAGE 4 OF 8)

DOSSAYAS DOCADO

1500	1	1560	1	3 + 1620	(II	4 + 1680	l £ 4	G + 1740	l 臼	AG -+ 1800	- О	
GAGG	ជ	ACATT	I H	AATTATTAATGAACAAG	O	GATA	Ω ,	AAAAGGAAATATTGCAGCCACTGTATTCAGAAACTCTCTGCAAGAAGCTG	Æ	ATATGAGCATTTATTTGTGCAACAGGACATAAAATATATTTCCCACAGAAG	ជា	
ACTO	£4	TCAAC	, "	GAA(ш	ATT	н	GAA	ធា	CACA	۴	
GCAJ	4	TTT	Ĺ	AAT	z	CTGA	J	SCAA	O	ATTCC	വ	
AGA(+	æ	ACTTTT +	H	rati	н	AGAAC	ជា	rcrgc 	ப ,	TAT 	н	
GAA	ы	3602	æ	AATJ	н	AAGA 	æ	CTC	S	ATA	>-	
SAG?	ĸ	AAT	Σ	TCCAATCCTGGATAGTCTACTAACTGCCGG	O	AGC	Æ	AGAAA -+	Z	ATAAA!	×	8
3GA(ы	TAG.	æ	TGC	Æ	ACAA	O	TCAG	pc,	ACAT	H	PO
AGA(ഥ	GAA	Z	PAAC	Ħ	LLL	니	TAT	Ľι	AGGA	Ω	5
GGA	ធ	GAA(×	PACT	H	GTC	ß	CTG:	>	GCAACA	O	m
AAG	œ	TCCG +-	ĸ	3TC1	IJ	AGAC +-	E	CCACTG	ۥ	GTGC +	οι	(PAGE
AAT	H	raaj	H	ATA(S	CAC	Ø	CAG	Æ	TTG 	>	(P
\TG2	ធា	rat?	'n	TGG	Ω	AGA	€+	TTG	4	TAT	T. Fr	8
AAG2	Ω	TAT' -+-	H	TCC - + -	h	ACAGAAGA	×	ATA	H	GAGCATTTATTT +	н	FIG.
CAG	ഥ	ATT		CAA	ы	TAAAC	X Q	3GA.	r Z	3AG(四	<u>u</u>
ATG 	A	ATG	O Z	ATTC	н	ATTA	н	AAA(×	ATAT(> ₁	
ACTCA	z	TCA.	ر س	GTAA	>	GTT7	>	TAGTA	>		L	
TAC	. 7	SAAT	<u>ы</u>	TGT(U	GAT(Ω	TTTA-	H	GTG	>	
TAGACTTACTCAATGCAGAAGATGAAATAAGGGAAGAGGAGAGAGA	ם נ	AAAAAGAATCAAATGATTTATTAATCCGGAAGAATAGAATGGCACTTTTTCAACATT		TGACTTGTGTAATTCCAATCCTGGATAGTCTACTAACTGCCGGAATTATTAATGAACAAG	E	AACATGATGTTATTAAACAGAAGACACAGACGTCTTTACAAGCAAG	Ħ	CGATTTTAGT	н	AAGCTGTGTT	4	
1441	 	1501		1561		1621	 	1681		1741		
	ບ		υ		U		U		υ		U	

1860	ı	1920	ı	1980	. 1	2040	1	2100		2160
ATGTTTCAGATCTACCAGTGGAAGAACAATTGCGGAGACTACCAGAAGAAGAACATGTA	VSDLPVEEQLRRLPEERTCK	AAGTGTGTATGGACAAAGAAGTGTCCATAGTGTTTATTCCTTGTGGTCATCTAGTAGTATAT	V C M D K E V S I V F I P C G H L V V C	GCAAAGATTGTGCTCCTTCTTTAAGAAAGTGTCCTATTTGTAGGAGTACAATCAAGGGTA	K D C A P S L R K C P I C R S T I K G T	CAGTTCGTACATTTCTTTCATGAAGAAGCAACCAAAACATCGTCTAAACTTTAGAATTAAT	V R T F L S *	TTATTAAATGTATTATAACTTTTAACTTTTATCCTAATTTGGTTTCCTTAAAATTTTATT 2041++++	######################################	FIG. 2 (PAGE 6 OF 8)
	O.	•	· υ		υ		υ		υ	U

DSS4743.DSC105

HUMAN hiap-1

	2161	TGAACATATATTTTTAGAAACTAAGAGAATGATAGGCTTTTGTTCTTATGAACGAAAAA	2220
υ			1
	2221	GAGGTAGCACTACAAACACAATATTCAATCCAAATTTCAGCATTATTGAAATTGTAAGTG	2280
บ			1
	2281	AAGTAAAACTTAAGATATTTGAGTTAACCTTTAAGAATTTTAAATATTTTGGCATTGTAC	2340
U			1
	2341	TAATACCGGGAACATGAAGCCAGGTGTGGTGGTATGTACCTGTAGTCCCAGGCTGAGGCA	2400
υ			ı
	2401	AGAGAATTACTTGAGCCCAGGAGTTTGAATCCATCCTGGGCAGCATACTGAGACCCTGCC	2460
U			1
		_	2520
υ	T 0 # 7	FIG. 2	t

U

U

HUMAN hiap-1

2580 --+ 2640 TTTTATAAAGAATTCTGTGAGXAAAAATTTAATAAAGCAACCXAAATTACTCTTAAAAAA CAGTGTCCTATACATCGAAGGTGTGCATATATGTTGAATCACATTTTAGGGACATGGTGT 2521 2581 O

2676

AAAAAAAAAAAAACTCGAGGGCCCGTACCAAT

2641

O

U

FIG. 2 (PAGE 8 OF 8)

DSS47.B.C.J.C.C.

SEQ ID NO:7	TTAGGTTACCTGAAAGAGTTACTACAACCCCAAAGAGTTGTGTTCTAAGTAGTATCTTGG	09
rd		ı
	TAATTCAGAGAGATACTCATCCTACCTGAATATAAACTGAGATAAATCCAGTAAAGAAAG	120
ૃત્ત		ì
	TGTAGTAAATTCTACATAAGAGTCTATCATTGATTTCTTTTTGTGGTGGAAATCTTAGTT 121	180
rd		ı
. 1	CATGTGAAGAAATTTCATGTGAATGTTTTAGCTATCAAACAGTACTGTCACCTACTCATG	240
ત્ય	Σ	ı
	CACAAAACTGCCTCCCAAAGACTTTTCCCAGGTCCCTCGTATCAAAACATTAAGAGTATA	300
SEQ ID NO:8 a	H K T A S Q R L F P G P S Y Q N I K S I	ı
£ .	ATGGAAGATAGCACGATCTTGTCAGATTGGACAAACAGCAACAAAAAAAA	360
Ø	M E D S T I L S D W T N S N K Q K M K Y	1
	FIG. 3 (PAGE 1 OF 7)	

DOSS+7'KS DOCIOO

361	GACTTTTCCTGTGAACTCTACAGAATGTCTACATATTCAACTTTCCCCGCCGGGGGTGCCT	420
 	DFSCELYRMSTYSTFPAGVP -	
421	GTCTCAGAAAGGAGTCTTGCTCGTGCTGGTTTTTTATTATACTGGTGTGAATGACAAGGTC	480
	VSERSLARAGFYYTGVNDKV -	
481	AAATGCTTCTGTTGTGGCCTGATGCTGGATAACTGGAAACTAGGAGACAGTCCTATTCAA	540
	K C F C C G L M L D N W K L G D S P I Q	1
541	AAGCATAAACAGCTATATCCTAGCTGTAGCTTTATTCAGAATCTGGTTTCAGCTAGTCTG	009
	KHKQLYPSCSFIQNLVSASL	1
601	GGATCCACCTCTAAGAATACGTCTCCAATGAGAAACAGTTTTGCACATTCATT	099
	G S T S K N T S P M R N S F A H S L S P	ı
661	ACCTTGGAACATAGTAGCTTGTTCAGTGGTTCTTACTCCAGCCTTCCTCCAAACCCTCTT	720
	TEHSSIFSGSYSSLPPIT	,
	FIG. 3 (PAGE 2 OF 7)	

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780	ı	840	1	006	1	960	i	1020	ı	1080	t	
AATTCTAGAGCAGTTGAAGACATCTCTTCATCGAGGACTAACCCCTACAGTTATGCAATG	NSRAVEDISSSRTNPYSYAM -	AGTACTGAAGAAGCCAGATTTCTTACCTACCATATGTGGCCATTAACTTTTTGTCACCA	STEEARFLTYHMWPLTFLSP -	TCAGAATTGGCAAGAGCTGGTTTTTATTATATAGGACCTGGAGATAGGGTAGCCTGCTTT	SELARAGFYYIGPGDRVACF -	GCCTGTGGTGGGAAGCTCAGTAACTGGGAACCAAAGGATGATGCTATGTCAGAACACCGG	A C G G K L S N W E P K D D A M S E H R -	AGGCATTTTCCCAACTGTCCATTTTTGGAAAATTCTCTAGAAACTCTGAGGTTTAGCATT	RHFPNCPFLENSLETLRFSI -	TCAAATCTGAGCATGCAGACACACTCGAATGAGAACATTTATGTACTGGCCATCT	SNLSMOTHAARMRTFMYWPS -	FIG. 3 (PAGE 3 OF 7)
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	GAC	3AA(CTA	TAA	AAC	AGT	TAA	TGA	TAT	TGT	TGTC	AGC	ACT.	TTCTT.	TAAT	rgcT	GAA	GAT	GAGAACTATAAAACAGTTAATGATATTGTGTCAGCACTTCTTAATGCTGAAGATGAAAAA	A + 1560
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	AG?	4GA	AGA	AGAGAAGAGGAG	GAA	GG.	AAA	ACA.	AGC	TGA	AGA	AAT	9	CATO	AGA'	rgaı	rrrgr	TCA	AAGGAAAAACAAGCTGAAGAATGGCATCAGATGATTTGTCATTAATT	ATT + 1620
1561	<u>ا</u> د	i i i	i i i	· - - - -	. x	. ш	×	Ø	4	ធ	ы	Σ	æ	S	Ω	Ω	L	S	L L	,
1621		GAA	GAS	CGGAAGAACAGA	AAI	Jego Jego	CTCTC	CT	CTC	AC.	AATT	GAC	ATG	TGT -+-	GCT	TCC	NATC +-	CTC	ATGGCTCTCTTTCAACAATTGACATGTGTGCTTCCTATCCTGGATAAT	AAT + 1680
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1681	[5]	TTT	AA.	AAAGGCC	CA	ATG	raa.	rtaa +	ATA	VAC.	TAAACAGGA	ACA	TGA	rgatatt	TAT	TTAA	ACAA	AA	CTTTTAAAGGCCAATGTAATTAATAACAGGAACATGATATTATTAAACAAAAACACAG	AG -+ 1740
	J	H.	L L K	Æ	Z	>	н	Z	쏘	0	ы	Ξ	Ω	н	н	ೱ	0	쏘	O'	'
1741	1	ATACCTT	TLL	TACA	4AG	CGA	GAGA	AAC	TGA'	rrg	ATA(CS	PITTO	GGGTT	TAT	AGG.	AAAT	rgc	ATACCTTTACAAGCGAGAGAACTGATTGATACCATTTGGGTTAAAGGAAATGCTGCGGCC	GGCC + 1800
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3TG + 1860	· >	AACAA + 1920	ا ۵	TGTT + 1980	- >	AAGAAAA + 2040	۲ ا	TGCCCTATTTGCAGGGTATAATCAAGGGTACTGTTCGTACATTTCTCTCTTTAAAGAAAA ++++++		TTTTAACCTGCATAAAAAGGTCTTTAAAATATTGTTGAACACTTGAAGCC	1
Til		AAC	ш	TCT	S	AGA.	<u>α</u>	4GA 		GAA 	
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CTCTA	ຸ ທ	rgr 	>	AGT	>	CCA	Ø	TGT	>	TLL	品
GAC		AGA:	Ω	raa.	×	ATG +	U	TAC +	E	AGGTC	(PAGE 6 OF 7)
AATTGA	н	AGAAGATGTTTCAGGTCTGTCACTGGA	凹	CTTGTAAA +	ပ	AGTATGC +	>	999	O	AAG	
NGA.	ជា	AAC)	E	AAC	E	GGT.	>	CAA	×	AAA 	က
AA.	×	TGAAGTATATTCCAACAGAAGATGTTTCAGGTCTGTCACTGGAAGAACAA	ሲ	TGCAAGAAGAACGAACTTGTAAAGTGTGTATGGACAAAGAAGTTTCTGTT	ĸ	CTTGTGGTCATCTGGTAGTATGCCAGGAATGTGCCCCTTCTCTAAGAAAA	ı	TATAATCAAGGTACTGTTCGTACATTTCTCTCTTA +	H	CAT	FIG. 3
rcra	ב	TATT +-	·H	AGA +	Ш	TCA +	H	TAT	н	CTGC.	ш
TG	υ	STA'	≯	AGA.	ជា	TGG 	Ŋ	999	Ŋ	AAC 	
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AC		GATAAGAATA	Ω	TTGAGGAGGT	u	GTATTTATTC	>	TGC	υ	ATAGTCTATA	
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1	FIG. 3 (PAGE 7 OF 7)		æ
258	TTTTTCTCTTATTTCTCCCCCTAGTTTGTGAGAACATCTCAATAAAGTGCTTTAAAAAG	2521	
252		2461	
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246	AAAGCTTTGAAXACTAAATTATAGTGTAGAAAAGAACTGGAAACCAGGAACTCTGGAGTT 1++	2401	
1			
240(AGTAGCGTCXCTGCTTGTTATGCATCATTTCAGGAGTTACTGGATTTGTTGTTCTTTCAG	2341	
ı			
234(TATTTACAAGGGAAGATTTATGTTTGGTGAACTATATTAGTATGTAT	2281	
1			
228(TTTGGTACTAATAATCTTGTTTCTGAAAGATGGTATCATATATTTAATCTTAATCTGTT	2221	
i			
2220	ATCTAAAGTAAAAAGGGAATTATGAGTTTTTCAATTAGTAACATTCATGTTCTAGTCTGC	2161	

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	MOOUT XIAD	
SEQ ID NO:9	GACACTCTGCTGGGGGGGGGGCCGCCTCCTCCGGGACCTCCCCTCGGGAACCGTCGCCCCTCGGGAACCGTCGCCCCTCGGGAACCGTCGACCCTCGGGAACCGTCGACCCTCGGGAACCGTCGAACCGTCGAACCGTCGAACCGTCGAACCGTCGAACCGTCGAACCGTCGAACCGTCGAACCGTCGAACCGTCGAACCGTCGAACCGTCGAACCGTCGAACCGTCGAACCGTCGAACCGTCGAACCGTCGAACACAAAAAAAA	;c + 60
rd		1
	GCGGCGCTTAGTTAGGACTGGAGTGCTTGGCGCGCAAAAGGTGGACAAGTCCTATTTTCCA 61	:A :+ 120
๙		I
	GAGAAGATGACTTTTAACAGTTTTGAAGGAACTAGAACTTTTGTACTTGCAGACACCCATTGCAGACACCATTGTACTTGCAGACACCACCATT	\T -+ 180
SEQ ID NO:10 a	M T F N S F E G T R T F V L A D T N	ı
	AAGGATGAAGAATTTGTAGAAGAGTTTAATAGATTAAAAACATTTGCTAACTTCCCAAGT	3T -+ 240
rd	K D E E F V E E F N R L K T F A N F P S	
	AGTAGTCCTGTTTCAGCATCAACATTGGCGCGAGCTGGGTTTCTTTATACCGGTGAAGGA	3A -+ 300
ro	SSPVSASTLARAGFLYTGEG	1
	GACACCGTGCAATGTTTCAGTTGTCATGCGGCAATAGATAG	3.4 360
ros	DTVQCFSCHAAIDRWQYGDS	ı
	FIG. 4 (PAGE 1 OF 6)	

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GCTGTTGGAAGACACAGGAGAATATCCCCCAAATTGCAGATTTATCAATGGTTTTTATTTT 361++++++	A V G R H R R I S P N C R F I N G F Y F	GAAAATGGTGCTGCACAGTCTACAAATCCTGGTATCCAAAATGGCCAGTACAAATCTGAA 421++++-4	ENGAAQSTNPGIQNGQYKSE	AACTGTGTGGGAAATAGAAATCCTTTTGCCCCTGACAGGCCACCTGAGACTCATGCTGAT 481+++-5	N C V G N R N P F A P D R P P E T H A D	TATCTCTTGAGAACTGGACAGGTTGTAGATATTTCAGACACCATATACCCGAGGAACCCT 541+++++	YLLRTGQVVDISDTIYPRNP	GCCATGTGTAGTGAAGAAGCCAGATTGAAGTCATTTCAGAACTGGCCGGACTATGCTCAT 601	AMCSEEARLKSFQNWPDYAH -	TTAACCCCCAGAGAGTTAGCTAGTGCTGGCCTCTACTACACAGGGGCTGATGATCAAGTG	LTPRELASAGLYYTGADDQV
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CAATGCTTTTGTTGTGGGGAAAACTGAAAATTGGGAACCCTGTGATCGTGCCTGGTCA 780	S M E P C D R A W S		GAACACAGGAGACACTTTCCCAATTGCTTTTTGTTTTGGGCCGGAACGTTAATGTTCGA	H R R H F P N C F F V L G R N V N V R	AGTGAATCTGGTGTGAGTTCTGATAGGAATTTCCCAAATTCAACAAACTCTCCAAGAAAT 900	D R N F P N S T N S P R N	CCAGCCATGGCAGAATATGAAGCACGGATCGTTACTTTTGGAACATGGATATACTCAGTT +++++++	EYEARIVTFGTWIYSV	AACAAGGAGCAGCTTGCAAGAGCTGGATTTTATGCTTTAGGTGAAGGCGATAAAGTGAAG	EQLARAGFYALGEGDKVK	TGCTTCCACTGTGGAGGAGGGCTCACGGATTGGAAGCCAAGTGAAGACCCCTGGGACCAG	CFHCGGGLTDWKPSEDPWDQ -	FIG. 4 (PAGE 3 OF 6)
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FIG. 4 (PAGE 4 OF 6)

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1441	CAGCTAAGGCGCCTACAAGAGGAGAAGCTTTCCAAAATCTGTATGGATAGAAATTTGCT	1500
	OLRRLQEEKLSKICMDRNIA -	
1501	ATCGTTTTTTTCCTTGTGGACATCTGGCCACTTGTAAACAGTGTGCAGAAGCAGTTGAC	1560
	IVFFPCGHLATCKQCAEAVD -	
1561	AAATGTCCCATGTGCTACACCGTCATTACGTTCAACCAAAAATTTTTATGTCTTAGTGG	1620
	KCPMCYTVITFNOKIFMS* -	
1621	GGCACCACATGTTATGTTCTTCTTGCTCTAATTGAATGTGTAATGGGAGCGAACTTTAAG	1680
1681	TAATCCTGCATTTGCATTCCATTAGCATCCTGCTGTTTCCAAATGGAGACCAATGCTAAC	1740
1741	AGCACTGTTTCCGTCTAAACATTTCTGGATCTTTCGAGTTATCAGCTGTATCATT	1800
	FIG. 4 (PAGE 5 OF 6)	,

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2100	CTGGGAGGATAAAGATTGTTTTAGATGCTCACTTCTGTGTTTTTAGGATTCTGCCCATTTA	2041
2040	GAATCTGCCCAATGACTTTAATTGGCTTATTGTAAACACGGAAAGAACTGCCCCACGCTG 1++++++	1981
1		
1980	TCATGCCTTTTGCATAAGCTTAACAAATGGAGTGTTCTGTATAAGCATGGAGATGTGATG	1921
ı		
1920	GTATATTGGTAGTACACTGACTTGATTTCTATATGTAAGTGAATTCATCACCTGCATGTT 1++	1861
1860		1801
	TAGCCAGTGTTTTACTCGATTGAAACCTTAGACAGAGGAAGCATTTTATAGCTTTTCACAT	

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FIG. 4 (PAGE 6 OF 6)

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GAATTCCGGGAGACCTACACCCCGGAGATCAGAGGTCATTGCTGGCGTTCAGAGCCTAG	GAAGTGGGCTGCGGTATCAGCCTAGCAGTAAAACCGACCAGAAGCCATGCACAAAACTAC	ATCCCCAGAGAAGACTTGTCCCTTCCCCTCTGTCATCTCACCATGAACATGGTTCAA		GACAGCGCCTTTCTAGCCAAGCTGATGAAGAGTGCTGACACCTTTGAGTTGAAGTATGAC	DSAFLAKLMKSADTFELKYD -	TTTTCCTGTGAGCTGTACCGATTGTCCACGTATTCAGCTTTTCCCAGGGGAGTTCCTGTG	F S C E L Y R L S T Y S A F P R G V P V P G V P V P V P V P V P V P V P	T.CAGAAAAGGAGT.C1GG.C1GG.C1111A.CAC1GG1GC.CAA1GACAAGGG.C1.C1.C1.C1.C1.C1.C1.C1.C1.C1.C1.C1.C1.	SERSLARAGFYYTGANDKVK -	TGCTTCTGCTGTGGCCTGATGCTAGACAACTGGAAACAAGGGGACAGTCCCATGGAGAAGAGAG	U	FIG. 5 (PAGE 1 OF 6)
GAATTCCGGGA(GAAGTGGGCTG	ATCCCCAGAGA.		GACAGCGCCTT	D S A		N C		സ പ പ	•	U	
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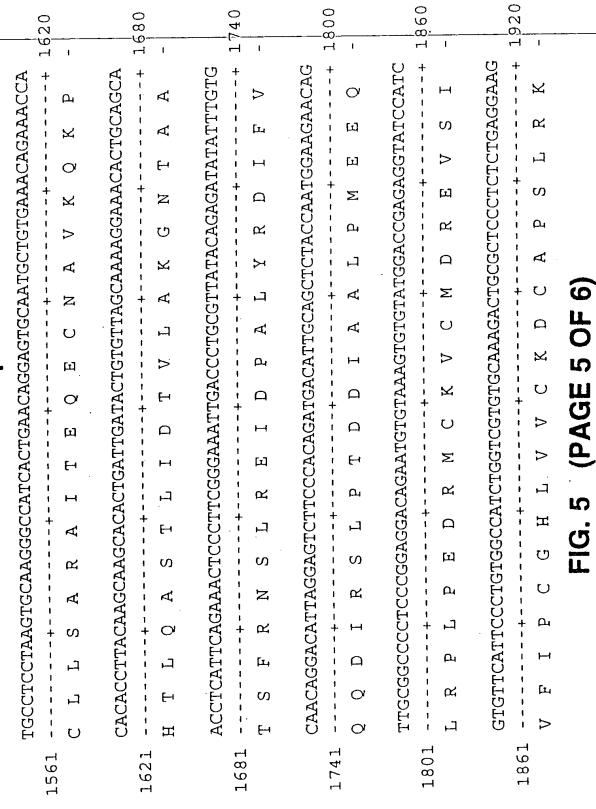
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							FIG	_	Ŋ	<u>:</u>)	(PAGE	SE SE	3	РО	F 6)						

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•	TTATCTACGTCAGACTCCCCAGAAGAT	1260
1201	LSTSDSPEDENADAAIVH	
	CCTGGAGAAGTTCGGAAGATGTCGT	000
1261	PGESSEDVVMMSTPVVKAA) V)
,	GAAATGGGCTTCAGTAGGAGCCTGGTGAGACAG	α κ
1321	EMGFSRIVROTVOWOIL))]
	GGTGAGAACTACAGGACCGTCAGTGACCTCGTTATAGGCTTACTCGATGCAGAAGAC	
1381	GENYRTUSDLVIGLLDAEDE	⊃ # #
•	ATGAGAGAGGAGCAGAGCAGGCGGCCGAGGAGGAGGAGTCAGATGATCTA	ר ה ה
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l I	ATCCGGAAGAACAAAATGGTGCTTTTC	ر م
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	FIG. 5 (PAGE 4 OF 6)	



ogas+, "+= . oga=oa

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	CPICRGTURTFLS*	ı
	CTAATGGTCCATGGCTGCAACTTCAGCCAGGAAGTTCACTGTCACTCCCAGTTCCAT	
1981	+	204
 	TCGGAACTTGAGGCCAGCCTGGATAGCACGAGACACCCCCAAACACACAAATATAAACAT	
2041	+	210
	GAAAAACTTTTGTCTGAAGTCAAGAATGAATGAATTACTTATAATAATAATTAAT	-
2101	+	216
	TICCITAAAAGIGCTAITIGIICCCAACICAGAAAAIIGIIIICIGIAAACAIAITIACA	
2161	+	222
	TACTACCTGCATCTAAAGTATTCATATTCATATTTCAGATGTCATGAGAGAGGGTTT	
2221	+1 1 1 1 4 4 4 4 4 4	228
	TGTTCTTGTTCCTGAAAGCTGGTTTATCATCTGATCAGCATATACTGCGCAACGGGCAG	
2281	+	234
	GGCTAGAATCCATGAACCAAGCTGCAAAGATCTCACGCTAAATAAGGCGGAAAGATTTGG	
2341	+	240
	AGAAACGAAAGGAAATTCTTTCCTGTCCAATGTATACTCTTCAGACTAATGACCTCTTCC	
2401	+	246
	L	
2461		

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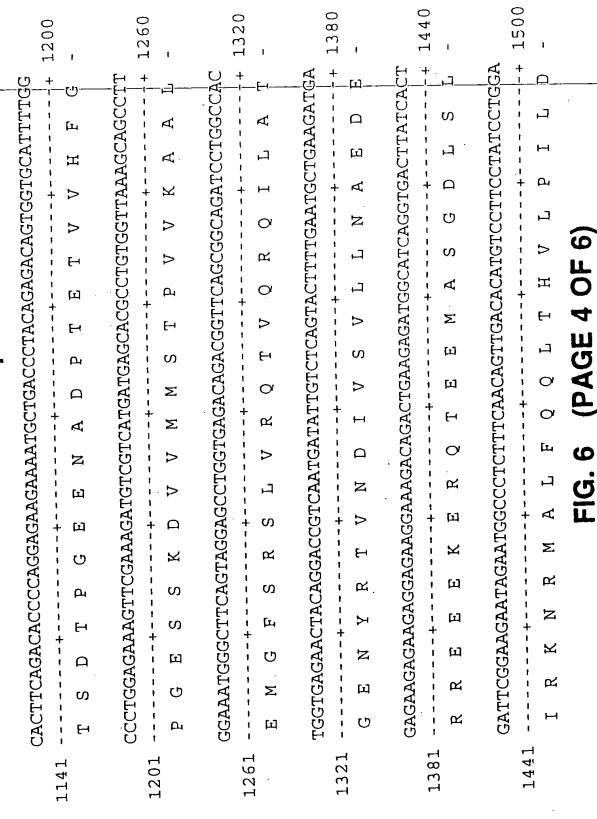
M-hiap-2

60 120 180 -	240	300	360	420
STCA CTTA AGGA E +	ATTC + S	ATTA + +	1GGAA + +	3TACA
CTGTGGTGGAGATCTATTGTCCAAGTGGTGAGAACTTCATCTGGAAGTTTAAGCGGTCA GAAATACTATTACTACTCATGGACAAACTGTCTCCCAGAGACTCGCCCAAGGTACCTTA CACCCAAAAACTTAAATGGAGAAGAGACAATCTTGTCAAATTGGACAAAGGA CACCCAAAAACTTAAAACGTATAATGGAGAAGAGCACAATCTTGTCAAATTGGACAAAGGA M E K S T I L S N W T K E	[=!!	GGAGTTCCTGTCTCAGAGAGGAGTCTGGCTCGTGCTTTTAT+++++ G V P V S E R S L A R A G F Y	TGACAAAGTCAAGTGCTTCTGCTGTGGCCTGATGTTGGATAACTGGAA ++++++	CCTGTTGAAAAGCACAGATTCTATCCCAGCTGCAGCTTTGTA P V E K H R Q F Y P S C S F V FIG. 6 (PAGE 1 OF 6)
	GAGCGAAGAAAAA 181+ S E E K N	AGCTTTTCCCAGG(241	TACAGGTGTGAAT 301	ACAAGGGGACAGT 361
SEQ ID NO:41 121 SEQ ID NO:42				

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-AA-	—თ—	TA(i—თ—	— <u>6</u>	 -		—თ—		 ⊌	₽G - 	II	
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וככו	i L	CCTGTGCTCTA	. 1	CTGCAGCTAT	ט	TAAGTTTTCTG	S	CAG	民	TAT	Σ	(9
TCI	် လ	CAA(ICC	! ப் பூ	TTT	ļ	AGA	Ω	GGAACCAAAGGATTATGCTATGTCAGAG	A	OF
AATATC	Σ	TCACTCCAA	S S	AGACTTCTCATCAAGGATGGATCC	Ĺ L	GTGGCC	Д.	CTGG	. U	TTA	. >	7
AAT		rca(3AT(Σ	GTG	3	3 3 3 3 3 3 3	Ф	GĞA 	Ω	(PAGE 2
AAG	: : X : S	ATI	; . ⊢-	4AG(民	TAT.	Σ	AGG	\mathcal{D}	AAA	×	AG
TCI	i S	1991	ט	ATC.	တ	CAG	ഗ	CAT		ACC	ф	<u>d</u>)
CC.	і (X) Н Н П	\GG1		CTC	S	TTACAG	>	TTA(>	GGA		40
TCI	S	√CG7	i 0≤	CTT(Г Г	CTTAC	Ħ	CTA'	⊱	AACTG	Z	9:
CAG		GA.	LERGGGI	4GA(Ω	ICT	Н	CTTC		CAA		FIG.
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CCC.	A	TCA	်တ	√GC.Z	4	3900	1	CAG		GAA	×	
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TAATCTTCTTGAGGCCAGTGTAATTACAAAACAGGAACATGATATTATTAGACAGAAAAC	ACAGATACCCTTACAAGCAAGAGCTTATTGACACCGTTTTAGTCAAGGGAAATGCTGC	AGCCAACATCTTCAAAACTCTCTGAAGGGAATTGACTCCACGTTATATGAAAACTTATT++++++	TGTGGAAAAGAATATGAAGTATATTCCAACAGAAGACGTTTCAGGCTTGTCATTGGAAGA 1681+++++++	GCAGTTGCGGAGATTACAAGAACGAACTTGCAAAGTGTGTATGGACAGAGGTTTC 1741+++++++-	TCTAGTAGTCTGCCAGGAATGTGCCCCTTCTCTAAG++++++	FIG. 6 (PAGE 5 OF 6)
1501	1561	1621	16	17	H	

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GT -+ 1920 -		-+ 2040 AG -+ 2100	GA -+ 2160		-+ 2280 AT -+ 2340		
GAAGTGCCCCATCTGCAGGGGACAATCAAGGGGACTGTGCGCACATTTCTCTCTC	IGA IGC		2041	CTTCTTGGGATT	TCCAGTCTGGGA	AGATGAAAGTGTTTCGGGTGGG	(PAGE 6 OF 6)
1861	19	19	2 6	2 6	2	7	0 0

Alignment of BIR (Baculoviral IAP Repeats) Domains

Bacul virus

Cydia pomonella

Cp_iap Op_iap

Human

Orgyia pseudotsugata

AP on X chromosome

two different human IAP genes hiap1, hiap2

m-xiap Mouse

mouse homologue of human xiap gene

Insect

Drosophilia IAP gene, not clearly a homologue of xiap or hiap

note on consensus:

The consensus line represents amino acids or very similar amino acids which are present in 14 of the 19 BIR sequences at each position.

Capitalized residues are those that are in the consensus sequence.

ChreitnWrr gDdpeldHhr waPqCpFV Chveimrwhe gEdpaadEkk waPqCpFV CggklanWep CniglrsWqk Churidawey CgggltdWkp CgggltdWkp CdgglkdWep Cdgg1kdWep C-----CngviakWek Chaavdrwqy Cggkllmwep GigDqVqCFc CggklkmWep CggklsnWep CdgglrcWes CdgglrcWes Chasidrwoy CglaldaWtr CglmldnWkl GggDktrCFc GygDatkCFy Gtwmeaecdf GpgDrVaCFa GegDkVkCFb Graddykerc G--D-V-CF-GpgDrVaCFa GegDKVkCFh GrandVkCFg kigogyrcyb GrgDeVrCaf GegDtvrcFs GvaDkvkCFc GvadbkvkCFc GadDqVqCFc GraDeVrCaf nr 1DbVkCvw GegDtVqCFs aLAGAGLYYG **QLABAGEYY** GLACAGFFY -LA-AGFYY-*ELAFAGFLYE* BLAKAGFYYt **GLASAGLYY**t dlaraGFYY1 **GLATAGETY!** qLArAGFYa1 **GLAFAGFYal** GLABAGEYYY **CHACAGETY** tMAknGFYY1 *LIALAGFLYt* BLALAGEYYL **GLASAGLYY**t WPvqf.leps rMAssGFYY1 aLAUAGEYY1 PPsgspvsas PRAGVDVBOL Wedyabltpr WP.llflaps Wiysv..nke WPssvlvnpe WPssvpvqpe WPrg1kqrpe WPremkqrpe WPisniqpas WPlnapvsae WPvsf.lspe PPagvyvser WPdyabltpr WP.lLflapt Wiysv..nke WPnpn.ilpq FPSSSDVSSS daRLrTFtd BURLATFOR ---RL-TF-kaaRLoTYtn ofnRLkTFan **elyRMsTYst** SfnRLkTFan seaRLksPqn sea Riks Fqn searrl Trhm haarritffn eaaRLrTFae saaRvksFhn eevRinTFek enaRLlTFqt haarMrTrmy SABREVTFRd elyRMsTYst yearivifgt rear! fTFgt Consensus Op_iap-1 Cp_iap-1 Cp_tap-2 Op_iap-2 n-xtap-1 n-xiap-2 n-xiap-3 hiap1-2 hiapi-3 hiap1-1 hiap2-1 hiap2-2 hiap2-3 diap-1 Klap-1 xiap-2 x4ap-3 diap-3 diap-2 NO:2 NO:25 NO:26 NO:27 NO:28 NO:29 NO:30 NO:19 NO:20 ID NO:21 NO:22 NO:23 NO: 24 NO: 15 NO: 16 NO: 18 NO: 17 H 品品 H H H H H B H SEO SRO SRO SRO SRO SRO SRO SRO SEQ SEO SEQ SEQ

wydrceyv WBPKCQPV 88P1CsmV

gDlvaerHrr

eDvpweqBvr

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wfPrCeF1

godpwygEak wfPrceY1

CyPgCkY1 wyPgCkY1

kDdamseHrr SECTOWOOHAK godpweelak dDapwqqHar

hfPncfFV LEPKCPFI hfPnCpF1

CDrawseHrr kDnamseHlr SEdpwdqHak

gDsptekEck lyPscrFV chrawseHrr hfPnCfFV

gDspidkEkq

gDsavgrHrk

ffPqCprV VEPDCLFI 1yPsCsFI

nDnafeeHkr gDsavgrHrr

1sPnCrFI

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SEQ ID NO:12	cp-iap				• • • • • • • • • •	
SEQ ID NO:13	diap			mtelgMelEs	VRI.aTFceWD	lasguesadt
SEQ ID NO:10	m-xiap	mtfnafe	orerfulade.	nkdeEFveEF	nDI been ED	1.143734565
SEQ ID NO:4	xiap		9020272000	TIXUEST VCDI	-Direction -	3332V2G5CL
SEQ ID NO:6	•	mtinsie	daxccapaci	nkeeEFveEF	DRLKTFanFP	aga?VSastL
	hiap1	mnivensifl	'snlmksantf'	elkyDLscEL	yRMsTYstFP	agv?VSezsL
SEQ ID NO:8	hiap2_	meds _z c11-	-sdw ens-n kq	knkyDFscEL	YRMSTYSTEP	agvPVSersL
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1				aaiDrWqyGD		
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Ī	xiap			atqStnsgiq		
Līī	hlap1	svnnleatsq	ptfpssvths	.thSllpgte	nsgyfrgsYs	nspsnpvnsR
	hiap2	s.aslcstsk	ntsemrns	fahSlsptle	haslfagsYs	slppnplnsR
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	!		-SD	lr1	FEVELDE	
Ξ				111		
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	xiap	psEthadyll	rtgqvvDiSD	tiyprnp.aM	YCEEARLKSE	dumachaurr
	hiap1	anq	EfSa	lmrssypcpM	nnenARLITE	qtWP.ltfLs
- -	hiap2	avE	DiSs	srtnpysyaM	stEEARFITY	hmWP.ltfLs
mar.	consensus	2	D-SD	M	EEARL-TF	WPL-
inst				•	•	<u></u>
		201	BIR 2			250
	cnJan	PorMaknGFY	YlGrsDeVrC	afCkveimrW	kegEdpaaDH	
	up-ap	Dest 3 baces	VIDEIDAVVC	vwCnGviakW	EknDnAfeFH	KRIFFCCPIV
	ulap	Pdalkkhori	TIMITEMVAC	FcCGGKLkNW	FRONTAUSTU	PREPACTEV
	m-xiap	PIELASAGLI	regadodade	D-CCCKI WILL	ED-D-A-SEU	-DUFD-C#FV
	xiap	PrELASAGLY	Aferabdadc	FcCGGKLkNW	EPCUIAWSER	INTERIOR TO
	hiap1	PtDLArAGFY	YiGpgDrVaC	FaCGGKLaNW	EPKDNAMSEH	IRREPACPEL
	hlap2	PSELARAGEY	YiGpgDrVaC	Facggklanw	EPKDdAmSEH	TRHFFNCPFI
	consensus	P-ELA-AGFY	Y-GD-V-C	F-CGGKL-NW	EP-D-A-SEH	-SHES-CSEA
						<u> </u>
		251				R3 300
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	m-xiap xiap	lgrnvnvrse lgrnlnirse	e s.gvssdrnF e sdavssdrnF . englqdtsr\ . ensl.etlr\	pnStnlPrNP tvSNl sisNl	sMAQyeARli .sMqthaARlk .sMqthaARmi	TEGEWIYS TETNWPsSvl
	m-xiap xiap hiap1	lgrnvnvrse lgrnlnirse	e s.gvssdrnF e sdavssdrnF . englqdtsr\ . ensl.etlr\	onStalP:NP	sMAQyeARli .sMqthaARlk .sMqthaARmi	TEGEWIYS TETNWPsSvl

Fig. 8 (page 1 of 3)

	301	BIF	२ ३		350
cp-lap	crpEQMAdAG	FFYtGyGDnt	KCFVCdGGLk	dWebeby PWe	CHVYWECTCA
	gpasalhqhG	LYYqkiGDqV		sWqkeDEPWf	eHAKWs PKC q
•	VnkEQLArAG_			dWkpsEDPWd	•
	<u>Vhkeulhead</u> VhkeQLArAG		KCFhCgGGLt		QHAXWYPqCk
xiap		FYYvGnaDdV		CWesgDDPWv	CHAKWEPTCe
hiap1	VapEQLASAG		KCFqCdGGLz	•	eHAKWFFTCe
hiap2	VopEQLASAG	5117G1.DCV	KCT-C-GGL-	-W50PW-	QHAKWEP-C-
consensus	VEQLA-AS	<u> </u>			
			•		400
	351		3		
	KAMITAKELDA	VqkVit			
•	Fulla KGpaY		nasscpaTap		
•	ATTGEREGER		LeEsLgrTaf		Ppltk
	ATTIFCKCOEA		leEclyTTtE		
hlap1	ATRITIKGGEE	TrdAdsshby	llEqLisTsD	spccenaess	iihle?gech
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consensus	PriKGCEY		1-1-1		9
	_				0
	401				450
cp∹ap	acVLpge.				
diap	adVLmdea	-	dggvVrnaid	rKllssGcaF	stldeLlhDi
m-xiap	kiDdtifqnP	mVqeAirMGF		eKIqtsGssY	lslevLIaDL
xiap	riDdtifqnP	mvceAliMGF		eKiqisGsnY	kslevLVaDL
hiap1	seDaIMmntP	vInaAveMGF		rKIlatGenY	FlyndIVIDL
hiap2	seDaVMmntP	wWksAleMGF	urdlykdraj		kowndiVsal
consensus	5-VP	-VXMGF	VK	-KIGY	LV-DL
	451				500
cp-lap					
dlap	fidaqaqaal	Evreppe			
m-xiap	vsAqkDnteD	E			
xiap	vnAqkDsmqD	: I			
hiap1	inAedEireE	Ererateeke	: sndlllirkn	malfqhlcc	710110S117
hiap2	: hledFkreS	Ekakcaeema	, sádlslírkn	. rmaliqqito	Albilopilk
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diap m-xiap xiap	sniskitdel	k distEGLRR k eistEGLRR kviptedvs dlpvEEGLRR	veDsklCKIC yveEciVcFV LkDarlCKVC LDeEVgVVF1 LGEEKLSKIC MDrnIaIVF1 LGEEKLCKIC MDrnIaIVFV LpEErtCKVC MDkEVsIVF1 LGEErtCKVC MDkEVsVVF1 L=EE-LCK-C MD-EVVF-
cp-iap diap m-xiap xiap	PCGHLatChq PCGHLVtCkq PCGHLVvCkd PCGHLVvCqe	CALSVCKCPM CRKIVESVIK CAPSVANCPM CRACIKGIVE CARAVCKCPM CYTVITINGK CARAVCKCPM CYTVITINGK CAPSLIKCPI CRSTIKGIVE CAPSLIKCPI CRGIIKGIVE CAPSLIKCPI CRGIIKGIVE CA-SV-KCPM CRI	VYFS. LFLS* LFMS* LFMS* LFMS* LFLS* LFLS*

Alignment of RZF (Ring Zinc Finger) Domains

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Cp_iap Op_ap

Orgyia pseudotsugata Cydia pomonella

Human

IAP on X chromosome

two different human IAP genes

Mouse

m-xiap

hiap1, hiap2

xiap

mouse homologue of human xiap gene

Insect

Drosophilia IAP gene, not clearly a homologue of xiap or hiap

note on consensus:

The consensus line represents amino acids or very similar amino acids Capitalized residues are those that are in the consensus sequence which are present in 6 of the 7 RZF sequences at each position.

Eqliriqger tCKVCMdkev sVvFiPCGH1 vvCqeCApel rkCPiC TECPIC dkCPmC dkcpmc ancemic **L**tcpvc VaCakCAlsv w ChdCApsl atchqcAeav vtCkqCAeav atCnqCApev vacgkchagv **EVCFVPCGHV** LVCFVPCGHV SIVF1PCGH1 AIVPVPCGH1 gvvr1PCGH1 AIVF FPCGH1 lckickgack **ECKVCMdkev** 1CKICyveec LCKVCLdeev LakicMdrai CKICMdrai Eenrg1kDar aveaevaDdr EkepqveDsk EqltrlpEer Eqitriquek Egltriggek Consensus Cp_iap Op_iap m-xiap hiapi xiap daib ID NO:33 ID NO:36 ID NO:38 ID NO:34 ID NO:35 ID NO:37 SEQ SEQ SEQ SEQ

P.B. Leukocyte Sm. Intestine Colon В A F. Kidney Sk. Muscle F. Brain F. Liver F. Lung Spleen Thymus Prostate Pancreas Placenta Kidney Ovary Testis Brain Lung Liver Heart 6.5 4.5 hiap-1 hiap-2 β-actin.

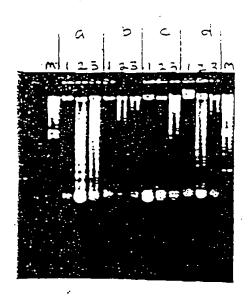
FIG. 10

P.B. Leukocyte В Sm. Intestine Colon A F. Liver F. Kidney Sk. Muscle Kidney F. Lung Spleen Thymus Prostate F. Brain Pancreas Heart Brain Placenta Lung Liver Ovary Testis DAED+7+3 DACIOO hiap-2 4.5 β -actin

FIG. 11

P.B. Leukocyte C Sm. Intestine Colon В A F. Liver F. Kidney Sk. Muscle Kidney F. Lung Pancreas F. Brain Spleen Thymus Prostate Placenta Lung Liver **Testis** Ovary Brain Heart 9.0 xiap β -actin

FIG. 12



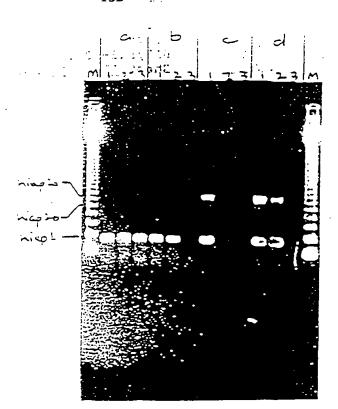


Fig. 13A and 13B

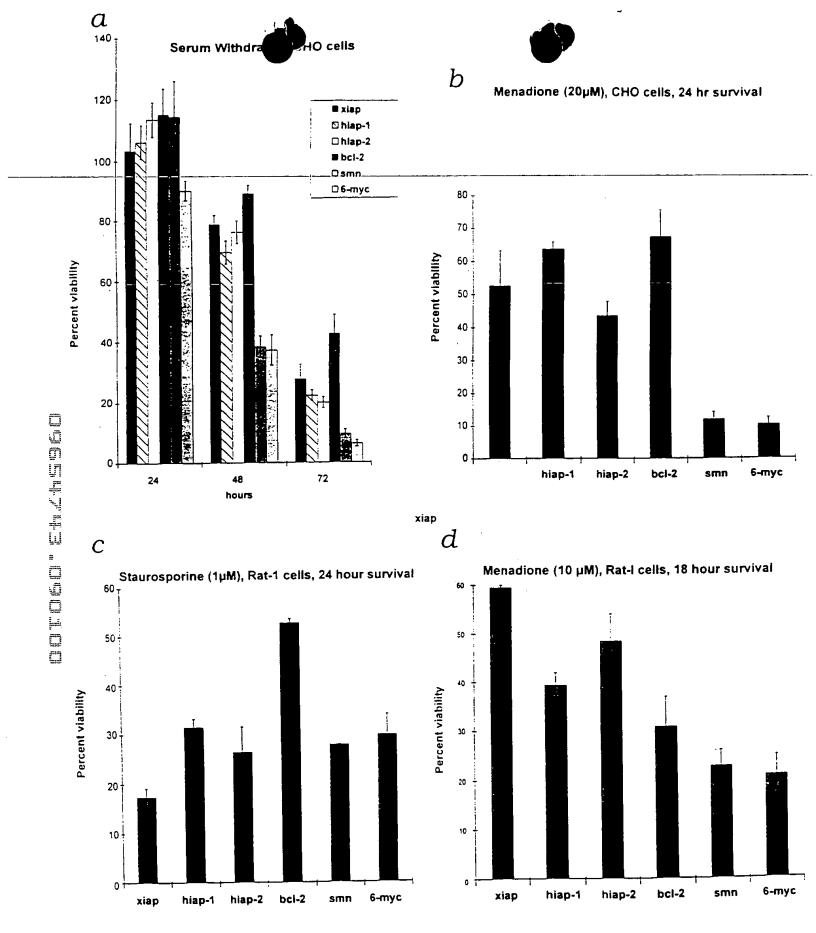


Fig. 14A - D